

REMARKS

This Amendment is submitted in reply to the non-final Office Action mailed on September 3, 2010. A Petition for a three month extension of time is submitted herewith. The Director is authorized to charge \$1110.00 for the Petition for a three month extension of time and any additional fees that may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 3712036-00713 on the account statement.

Claims 1 and 3-6 are pending in this application. Claims 2 and 7-13 were previously canceled without prejudice or disclaimer. In the Office Action, Claims 1 and 3-6 are rejected under 35 U.S.C. §103. In response, Claims 1 and 6 have been amended. The amendments do not add new matter and are supported in the specification at, for example, page 4, lines 18-32; page 7, lines 10-13. In view of the amendments and/or for at least the reasons set forth below, Applicants respectfully request that the rejections be reconsidered and withdrawn.

In the Office Action, Claims 1 and 3-6 are rejected under 35 U.S.C. §103(a) as being unpatentable over GB 2116823 to Soukup ("*Soukup*") or U.S. Patent No. 4,041,186 to Evers et al. ("*Evers*"). For at least the reasons set forth below, Applicants respectfully submit that the cited references are deficient with respect to the present claims.

Currently amended independent Claims 1 and 6 recite, in part, methods for increasing the organoleptic properties of a coffee flavor provided in a food or beverage, comprising the step of using about 0.5 ppb to 0.4 ppm of an aroma-providing substance selected from the group consisting of 3-mercapto-2-butanone, 2-mercapto-3-pentanone, and combinations thereof. The amendments do not add new matter and are supported in the specification at, for example, page 4, lines 18-32; page 7, lines 10-13. Applicants have surprisingly found that certain straight chain mercapto alkanones are surprisingly effective when used alone or in admixture in increasing the organoleptic properties of a coffee flavoring. The aroma-providing substance provides a portion of the flavors or aroma obtained from or that existed in freshly brewed coffee. Certain of these compounds have been proposed as additives for providing meat flavors to foods, and it was to be unexpected that they have the property of increasing the organoleptic properties of a coffee flavor. See, specification, page 3, lines 19-27.

For example, *Soukup* and *Evers* fail to disclose or suggest methods for increasing the organoleptic properties of a coffee flavor provided in a food or beverage, comprising the step of using about 0.5 ppb to 0.4 ppm of an aroma-providing substance selected from the group consisting of 3-mercapto-2-butanone, 2-mercapto-3-pentanone, and combinations thereof as required, in part, by independent Claims 1 and 6. Indeed, the Patent Office even admits that “[t]he claims appear to differ as to the recitation of specific amounts and the recitation of increasing organoleptic amounts.” See, Office Action, page 2, lines 19-20. Applicants further submit that *Soukup* and *Evers* fail to disclose or suggest the presently claimed mercapto alkanones.

Instead, *Soukup* is entirely directed to the use of 4-methyl-4-mercapto-2-pentanone to add a “catty fruity” flavor note to foodstuffs. See, *Soukup*, Abstract. Nowhere does *Soukup* suggest adding an aroma-providing substance selected from the group consisting of 3-mercapto-2-butanone, 2-mercapto-3-pentanone, and combinations thereof to a food substance, let alone using about 0.5 ppb to 0.4 ppm of the aroma-providing substance. Further, *Soukup* relates only to 4-methyl-4-mercapto-2-pentanones, which is in contrast to the presently claimed compounds because it is a beta-mercaptoalkanone. In contrast, the presently claimed compounds are alpha-mercapto-alkanones, which are quite different in sensory quality (sulfury, fresh, meaty) as compared to 4-methyl-4-mercapto-2-pentanone (catty, sulfury). This difference in sensory quality is believed to be due to the position of the thiol group relative to the keto group.

Evers is entirely directed to flavoring compositions with cyclic 3-furyl sulfides and a co-flavoring adjuvant (co-ingredient) that includes certain mercapto-alkanones. While *Evers* discloses that the compositions may include about 0.0001 ppm to about 250 ppm of 3-furyl sulfides, *Evers* fails to disclose or suggest using any amounts of the co-ingredients, let alone using about 0.5 ppb to 0.4 ppm of the co-ingredients. See, *Evers*, Abstract; column 8, 59-63. Nowhere does *Evers* suggest adding an aroma-providing substance selected from the group consisting of 3-mercapto-2-butanone, 2-mercapto-3-pentanone, and combinations thereof to a food substance, let alone using about 0.5 ppb to 0.4 ppm of the aroma-providing substance. For at least the above-mentioned reasons, Applicants respectfully submit that the cited references are deficient with respect to the present claims.

The Patent Office acknowledges that the present claims differ from the disclosure of both *Soukup* and *Evers*, but asserts that the present claims would have been obvious because *Soukup* and *Evers* et al. teach the use of mercapto alkanones. See, Office Action, page 2, line 21-page 3, line 4. Applicants respectfully disagrees and submits that the Manual of Patent Examining Procedure clearly states that “[a] genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named.” *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). Indeed, the disclosure of a large genus rarely anticipates a narrowly claimed species.

For example, in the Court of Customs and Patent Appeals case of *In re Petering*, a test for determining whether a disclosed genus is sufficiently small enough to anticipate a claimed species was established. 301 F.2d 676, (CCPA 1962). The application at issue in *Petering* contained claims to a particular species of compound. The Examiner cited a reference disclosing a chemical genus, which included the claimed species, having a limited number of substituent groups that represented either hydrogen or alkyl radicals, and an R group containing an OH group. The court held that this formula alone could not anticipate the claimed species because there were too many compounds within this disclosed genus - the genus was too large. The reference, however, also disclosed preferred substituent groups, which included about twenty compounds defining a subgenus. The court found that one of ordinary skill in the art would have been informed enough by the reference to “at once envisage” each member of the subgenus, which included the claimed species. *Id.* Accordingly, the genus-species anticipation test states that a genus anticipates a species if one of ordinary skill in the art is able to “envisage” the claimed species within the disclosed genus. This test was later confirmed by the CCPA in *In re Schauman*, 572 F.2d 312, (CCPA 1978).

Recent Federal Circuit case law has confirmed that the *Petering* and *Schauman* analysis remains the test when considering whether or not a prior art document’s disclosure of a genus anticipates a claimed species. See, *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1084 (Fed. Cir. 2008) and *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1376 (Fed. Cir. 2006) (citing *Petering* and *Schauman* and emphasizing that the disclosure of a broad genus can be narrowed to a specific group of compounds if the reference also discloses preferred

embodiments or compounds). Although the above analysis applies to anticipation rejections, Applicant respectfully submits that, for many of the same reasons, the presently claimed markapto alkanones, as well as the presently claimed amounts of same, cannot be rendered obvious by the disclosure of a genus. Indeed, the sheer number of possible mercapto alkanones is simply too large to render obvious the use of a specific mercapto alkanone.

Accordingly, Applicants respectfully request that the obviousness rejection of Claims 1 and 3-6 under 35 U.S.C. §103(a) to *Soukup* or *Evers* be reconsidered and withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly request an early allowance of the same. In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Respectfully submitted,

K&L GATES LLP

BY 

Robert M. Barrett
Reg. No. 30,142
Customer No. 29157
Phone No. 312-807-4204

Dated: March 3, 2011